

Infant Death and Injury

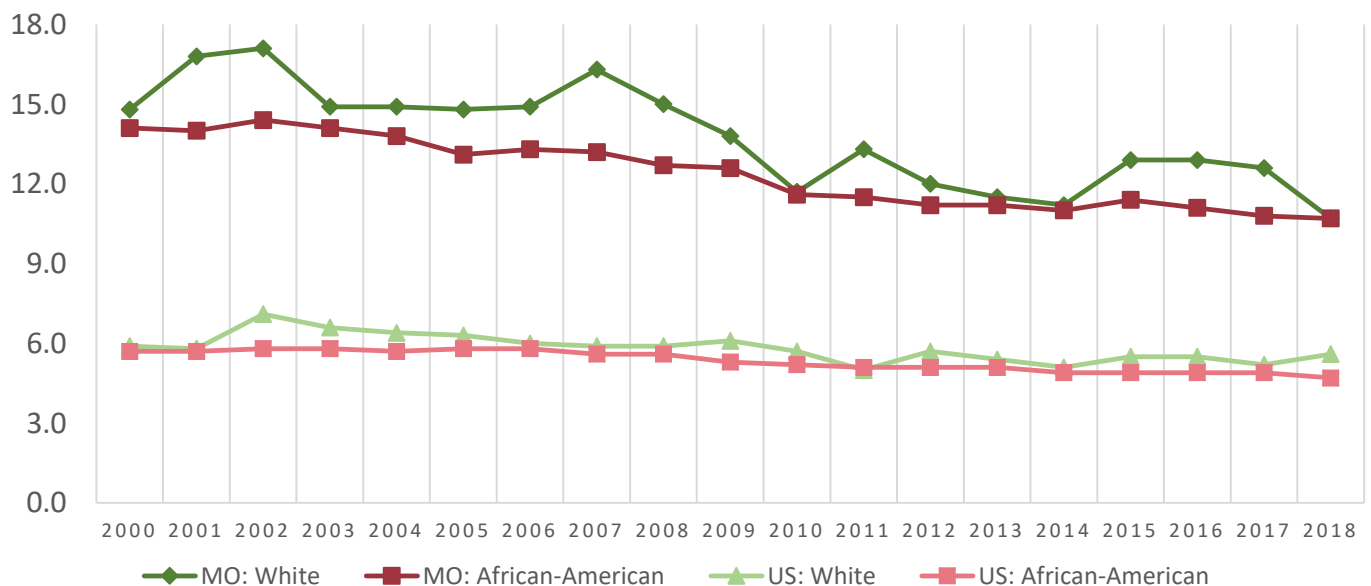
Background

Infant Mortality is an internationally-regarded measure of a population's health, providing insight about a country or state's ability to care for the health and well-being of its citizens and ensure the safety of future generations. The United States continues to experience higher infant mortality than other developed countries. In the United States, 21,500 infants die every year, including approximately 459 in Missouri. Missouri's 2018 infant death rate of 6.3 per 1,000 live births was 10% higher than the most recent national rate of 5.7 in 2018.¹ The leading causes of death among infants are complications from low birth weight and prematurity, and congenital anomalies, or birth defects. Preterm birth and the associated care and treatment costs the United States more than \$26 billion annually.²

Infant Mortality in Missouri

Infant mortality refers to the death of an infant before his or her first birthday. The infant mortality rate is defined as the number of deaths among all live births in one year. Rates of infant deaths have been decreasing since 2013 for African-American infants, while the rate for white infants increased slightly. Even with the decline in infant deaths, African-American infants had a significantly higher rate than white infants. The ratio between African-American and white infant mortality rates (IMR) in 2013 was 2.1 while the ratio in 2018 was 1.9 which indicates an almost 10% decrease in the ratio between races.³ There is some evidence that the persistent disparity in infant mortality rates between African-American and white babies in the United States is driven primarily by the frequency of prematurity-related adverse outcomes in the African American population.⁴ Babies born between 34 to 36 weeks gestation have an infant mortality rate three times as high as babies born full term.²

Figure 1. Infant Mortality by Race per 1,000 live births, Missouri and U.S. , 2000-2018



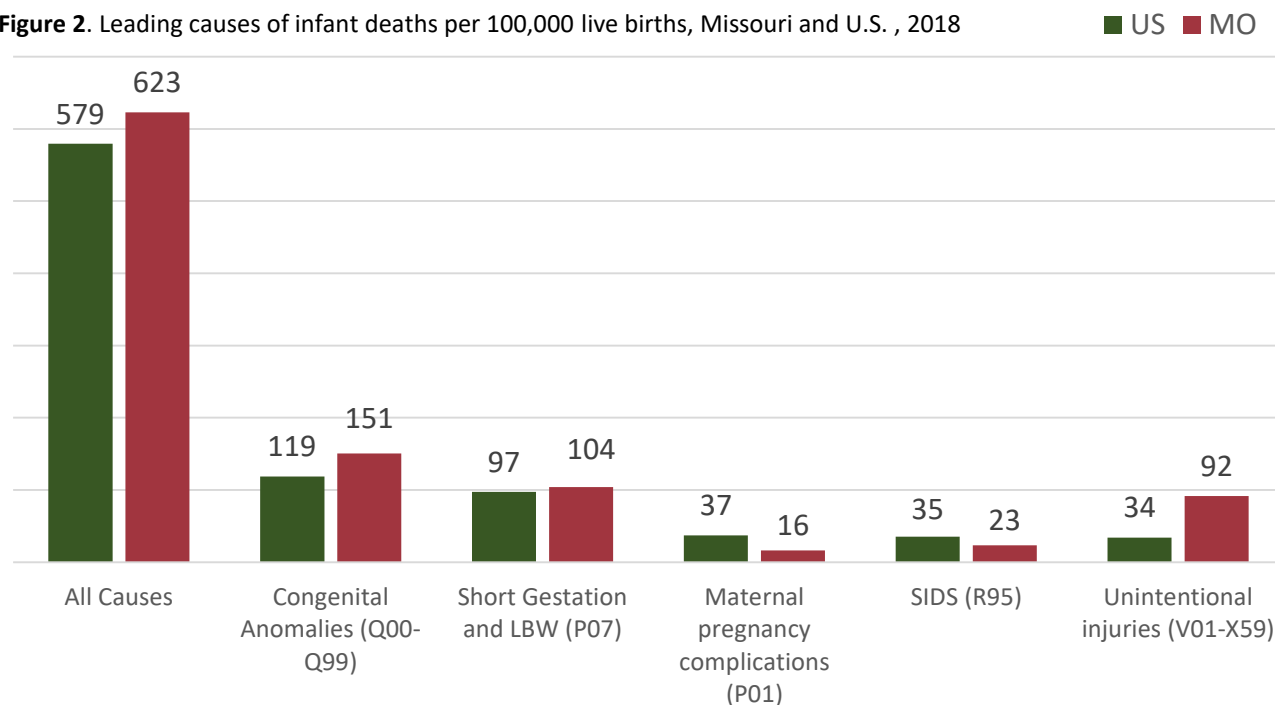
Missouri Title V Facts: Infant Death and Injury

Many of the leading causes of infant mortality can be prevented by taking good care of the mother's health before and during pregnancy. One of the biggest ways to reduce infant mortality is to ensure that the mother receives adequate prenatal care. Other ways to reduce risk include eliminating the use of alcohol and drugs during pregnancy, quitting smoking or tobacco use before or during pregnancy, taking folic acid, maintain a healthy weight, controlling other chronic conditions like hypertension and diabetes, reducing exposures to infections, completing newborn screenings, and creating a safe sleep environment for the infant.⁵

The five leading causes of infant deaths in Missouri were birth defects, preterm birth and low birth weight, unintentional injuries, maternal pregnancy complications, and sudden infant death syndrome. The top three leading causes account for more than half of infant deaths. Congenital malformations and chromosomal abnormalities contribute 22% of all infant deaths. Prematurity and low birth weight comprise another 17%, and unintentional injuries which including accidental suffocation and strangulation in bed contribute 11%. Sudden Infant Death Syndrome (SIDS) comprise 5% and maternal pregnancy complications contribute 5%. All other causes make up the remaining 40%. Some causes of death are preventable, while others are more difficult to address.

Infant mortality is divided into neonatal and postneonatal periods with different leading causes of death associated with each period. Neonatal deaths occur before 28 days of life, while postneonatal deaths occur between 28 and 365 days. Prematurity (birth before 37 completed weeks of gestation), congenital anomalies (birth defects) and maternal complications of pregnancy are important contributors to neonatal death. Deaths due to suffocation, congenital anomalies (birth defects) and Sudden Infant Death Syndrome (SIDS) are the most significant single causes of postneonatal death.

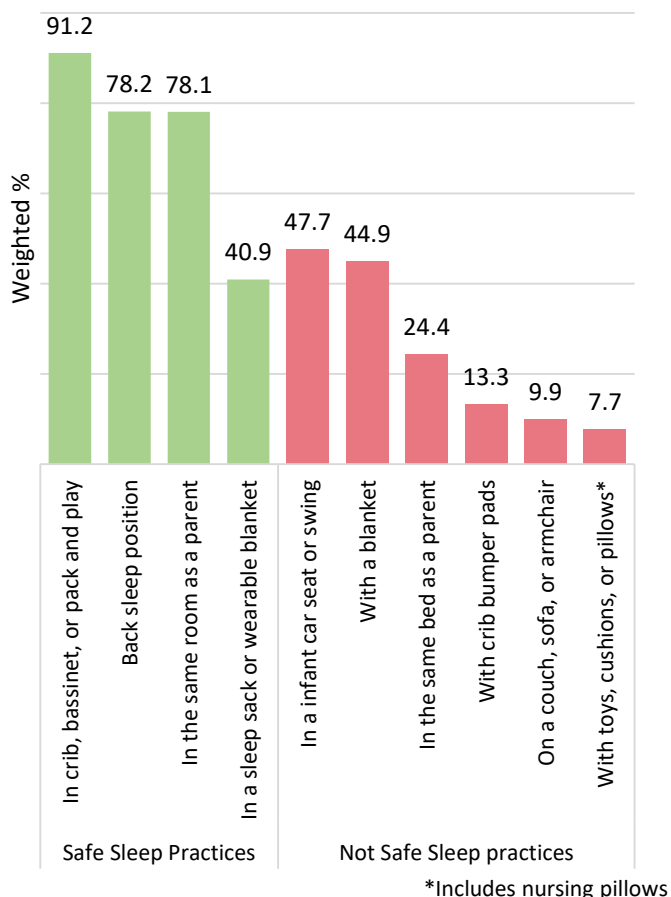
Figure 2. Leading causes of infant deaths per 100,000 live births, Missouri and U.S. , 2018



Injury Prevention and Safe Sleep

There are many ways that parents and caregivers of infants and young children can reduce the risk of injury and injury-related death among their children. Missouri's rate of injury-related death is nearly three times higher than the national rate. The American Academy of Pediatrics recommends that all infants younger than one year of age be placed to sleep on their back, alone, on a firm surface with no pillows, toys, or soft bedding, to reduce the risk of suffocation-related sleep deaths and SIDS. It is also recommended that infants share a room, not a bed, with their parents for at least 6 months to reduce the risk of SIDS and suffocation-related infant death.⁶ Mothers with less education, lower household income, who are African-American, or who live in rural counties, are significantly less likely to place their babies to sleep on their backs. Additionally, African-American mothers (43%) practiced bed-sharing, the act of sharing a sleep surface with an infant, at over twice the rate of non-African-American mothers (20%).⁷

Figure 3. Safe Sleep Practices, Missouri PRAMS 2014-2017



Infants with Special Health Care Needs

Special health care needs in very young children may be identified before birth (for example, chromosomal disorders such as Down Syndrome), or after birth through surveillance and detection systems such as newborn bloodspot or hearing screening, or developmental assessments done by caregivers or pediatricians. Once identified, these infants may benefit from additional supports, such as medical monitoring, extended post-birth hospitalization, medical supplies, and more. Timely identification of special health needs has the potential to significantly impact outcomes for members of this population. 16% of children with a special health care need were born premature, more than 3 weeks before their due date, and 13% were born with a low birth weight, compared to 9% and 7%, respectively, of non-SHCN children. Once identified, infants with special health care needs may require additional medical or behavioral support for both baby and family in the long-and/or short-term. Parents of infants and young children with special health needs may have their needs better met through use of a medical home.

What is Being Done?

Home Visiting: Home visiting programs funded through Title V and other sources seek to improve infant and maternal health outcomes, school readiness, socioeconomic attainment, and other key indicators of health and well-being. Home visiting nurses educate on safe sleep, provide resources for smoking cessation, teach mothers about appropriate child care practices, and link mothers to community resources to help them care for themselves and their babies. Other home visiting programs are administered through the Department of Social Services, Children's Trust Fund, Department of Elementary and Secondary Education, and others.

<https://health.mo.gov/living/families/homevisiting/>

Safe Cribs for Missouri: The Safe Cribs for Missouri program provides portable cribs and safe sleep education to low-income families who have no other resources for obtaining a crib. The goal of the program is to support families and reduce the risk of sleep-related infant deaths.

<https://health.mo.gov/living/families/babies/safecribs/>

Newborn Screening and Newborn Hearing Screening: Newborn screening refers to screenings performed on newborns shortly after birth to protect them from the serious effects of disorders that otherwise may not be detected for several days, months, or even years. Missouri law requires all babies born in the state to be screened for over 70 different disorders. Additionally, the Newborn Hearing Screening program seeks to screen all babies for hearing loss by one month of age and refer eligible children to appropriate future testing and intervention.

<https://health.mo.gov/living/families/genetics/newbornscreening/>

CYSHCN Program: The Children and Youth With Special Health Care Needs Program focuses on timely identification and care coordination for children with complex health needs who meet certain medical eligibility guidelines. This program also provides limited funding for diagnostic and treatment services for these children. <https://health.mo.gov/living/families/shcn/>

Local Public Health Agencies: IN 2018, 5 local public health agencies identified that safe sleep promotion was their priority area for their MCH Services Contract activities, with the goal of reducing sleep-related deaths in their communities.

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